UN environment programme

21 June 2024, Vienna, Austria

Global Material Flows Database

Session 8: Production of selected important indicators for waste and materials management policies, including circular economy
REGIONAL TRAINING ON THE PRODUCTION AND USE OF WASTE AND CIRCULAR ECONOMY STATISTICS AND INDICATORS

Ekaterina Poleshchuk

UNEP is the custodian agency for 25 SDG indicators, including:

- **8.4.1/12.2.1 Material footprint**, material footprint per capita, and material footprint per GDP
- **8.4.2/12.2.2 Domestic material consumption**, domestic material consumption per capita, and domestic material consumption per GDP

To report SDG indicators 8.4.1/12.2.1 and 8.4.2/12.2.2 to the Global SDG Database, UNEP uses:

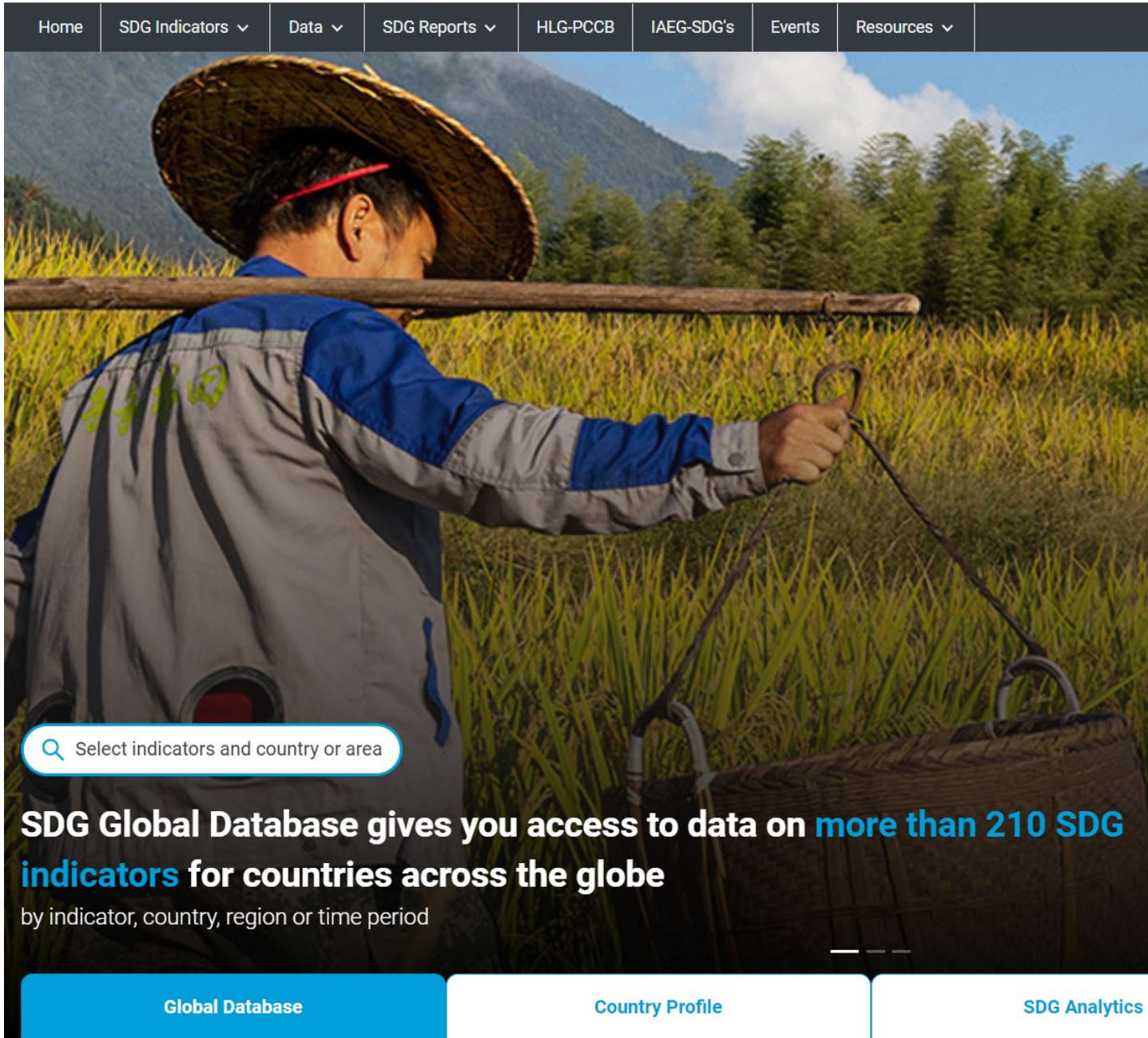
- National data collected from countries

These data are reported with footnote "C" (country)

and

- Global estimates from the Global Material Flows Database, developed by UNEP-IRP

These data are reported with footnote "E" (estimate)



Methodological support

Global manual on EW-MFA:

[UNEP (2023). The use of natural resources in the economy: A Global Manual on Economy-Wide Material Flow Accounting]

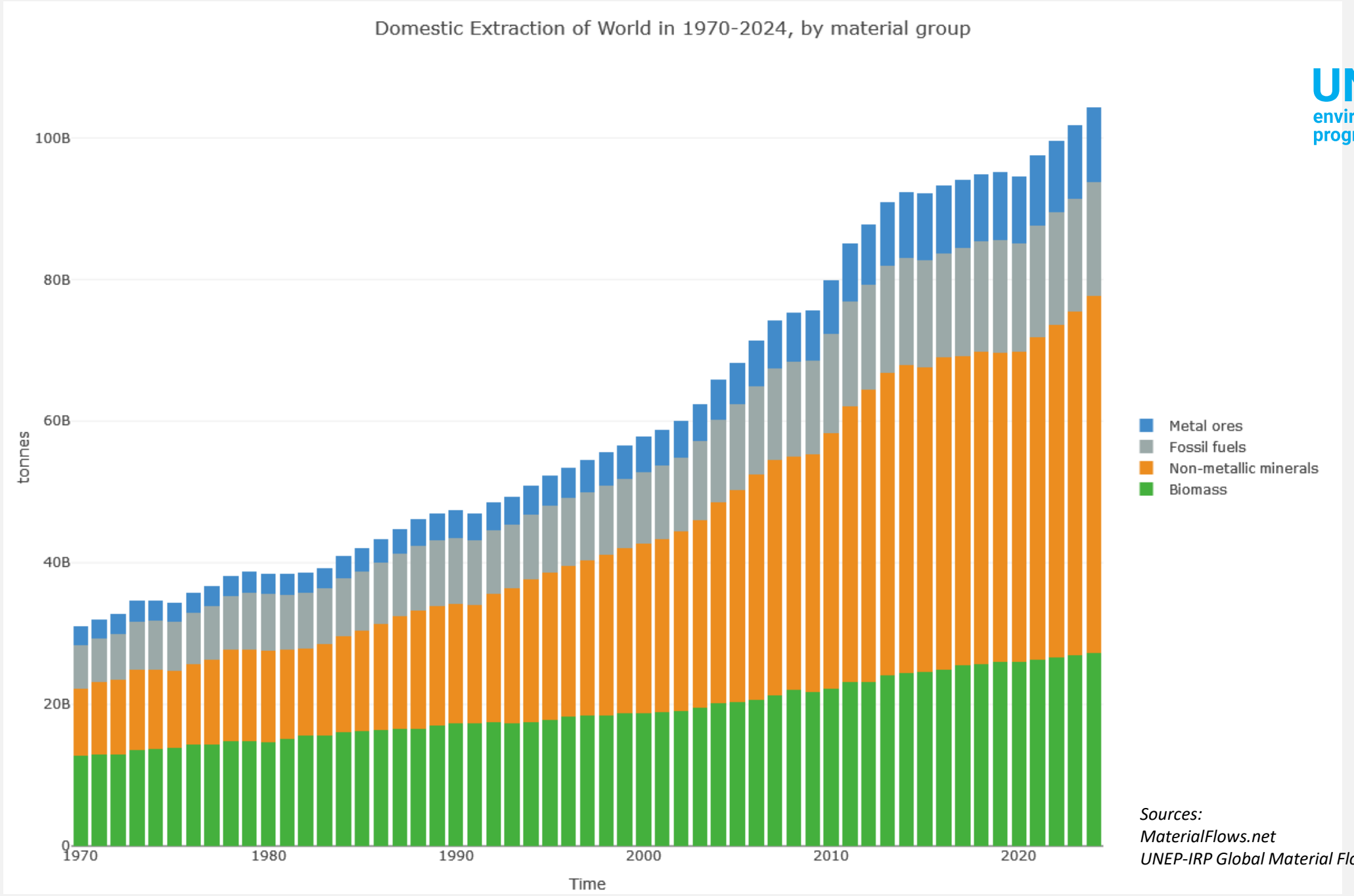
- First published in 2021
- Revised in 2023

Translated into:

- Arabic, French, Russian
- Spanish is coming

Here

- Coverage: 217 countries/territories
- Period: 1970 – 2024
- Aligned with the SEEA Central Framework
- Provides indicators on extraction and direct trade of raw materials, as well as indirect trade flows (including material footprints)
- Material categories: biomass, fossil fuels, metals, non-metallic minerals (disaggregated into 13 sub-categories)
- Main data sources: FAO, UNSD, UN COMTRADE, IEA, US EIA, World Mining Data, British Geological Survey, US Geological Survey (see technical annex)



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International Resource Panel

Sources:
MaterialFlows.net
UNEP-IRP Global Material Flows Database

National Data: Data collection tool

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QUESTIONNAIRE ON ECONOMY-WIDE MATERIAL FLOW ACCOUNTS for the SDG indicators 8.4.1/12.2.1 and 8.4.2/12.2.2

(EW-MFA Questionnaire for SDGs)

Country:

Deadline for returning the EW-MFA Questionnaire for SDGs:

If you have any questions, please contact us at the following email address: unep-ewad-sdgs@un.org

TABLE OF CONTENTS

Sheet	Title	Status
Intro & Contents	Introduction and table of contents	*for information*
Methodology & Guidance	Methodological sources and guidance for working with this Questionnaire	*for information*
Description & Definitions	Description of tables and definitions	*for information*
Table A	**Domestic extraction**	***to review / re-fill in***
Table B	**Imports of materials**	***to review / re-fill in***
Table C	**Exports of materials**	***to review / re-fill in***
Table D	Headline indicators	*filled automatically*
Table E	**Material flow accounts in raw material equivalents**	***to review / re-fill in***
Table F	**Supplementary information from the country**	***to fill in***

Last update: June 1, 2024

Intro & Contents | Methodology & Guidance | Description & Definitions | Table A | Table B | Table C | Table D | Table E | Table F

National Data: Data collection process

The **UNEP IRP** provides estimates on Domestic material consumption and Material footprint

UNEP communicates with countries (sends a pre-filled questionnaire to countries for review or replace the data with national data)

In April 2022, UNEP sent out a pre-filled questionnaire to 193 UN Member States (NSOs)

National SEEA focal points were also informed

Countries revise/replace the data with national data if possible/needed and provide feedback to UNEP

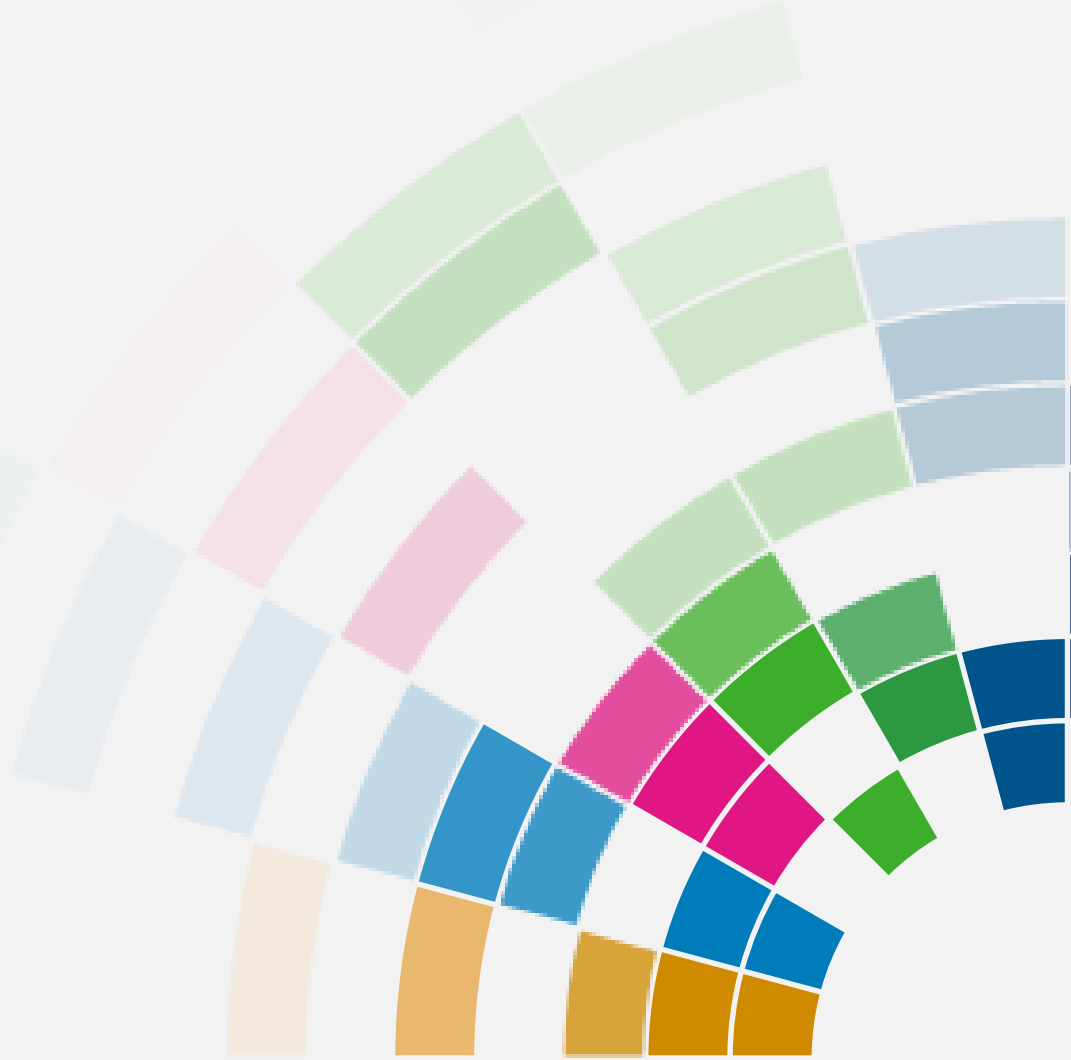
As of 31 August 2022, UNEP has received feedback from 30 UN Member States

UNEP analyzes the replacement data and prepares them for publication on various platforms (Global SDG database, UNEP WESR)

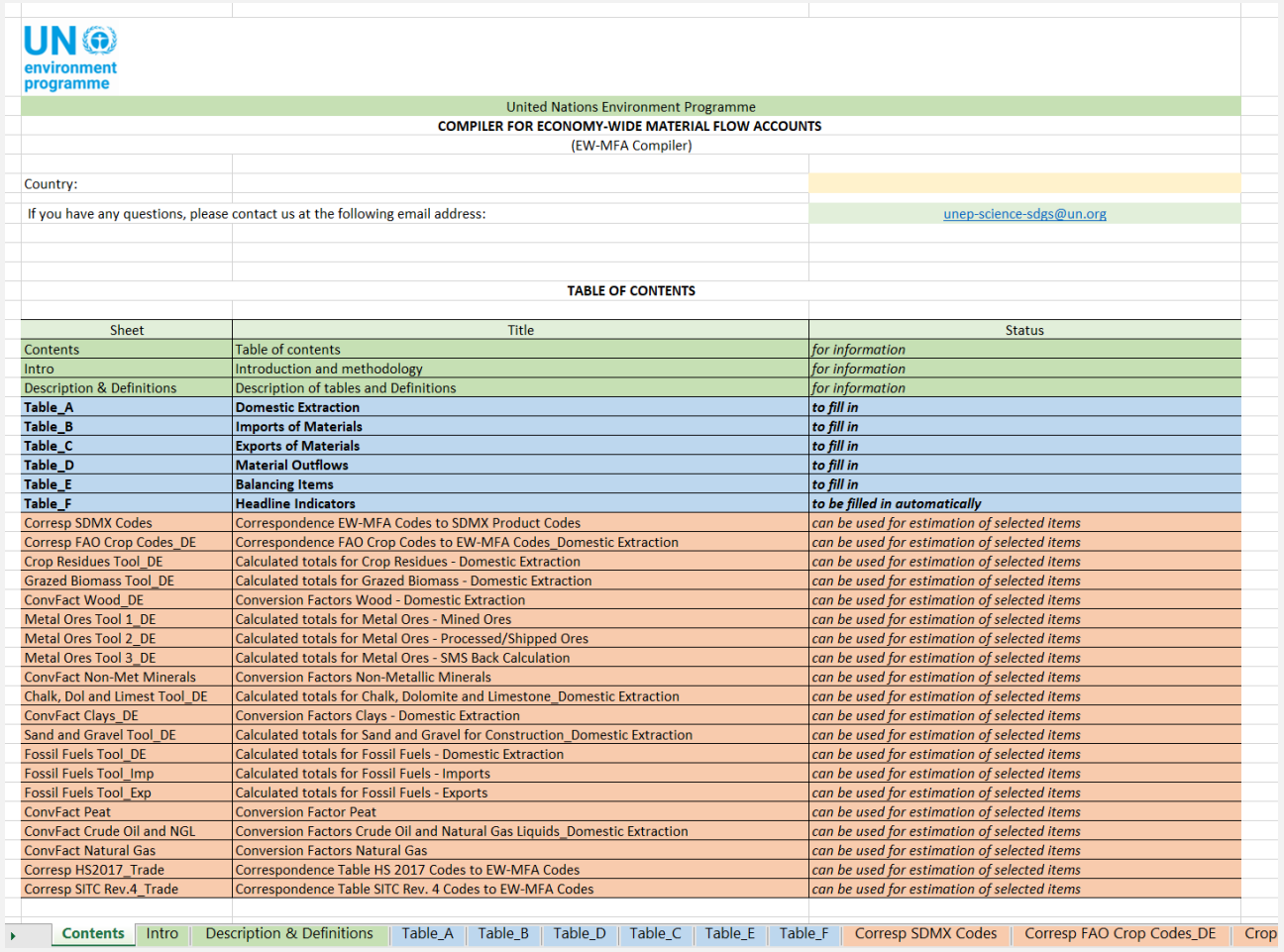
On 1 March 2023, UNEP reported national DMC data to UNSD for 26 countries

2024 EW-MFA Data Collection and SDG Reporting

- UNEP plans to collect EW-MFA data every two years
- The next data collection is in July 2024
- Eurostat countries will not be included in UNEP data collection in 2024:
  - To report national data for relevant SDGs to the Global SDG Database, UNEP uses Eurostat database



EW-MFA Compiler



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COMPILER FOR ECONOMY-WIDE MATERIAL FLOW ACCOUNTS

(EW-MFA Compiler)

Country:

If you have any questions, please contact us at the following email address: unep-science-sdgs@un.org

TABLE OF CONTENTS

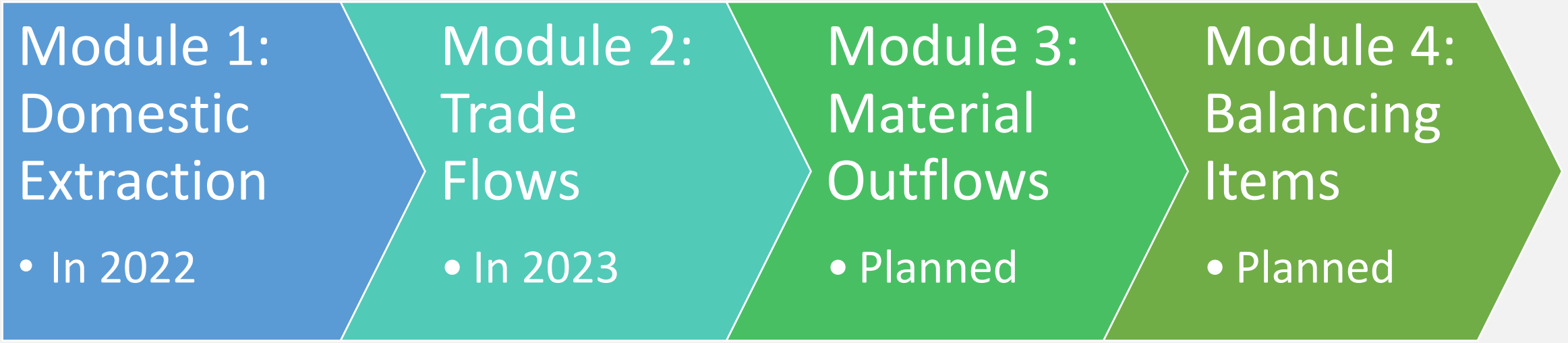
Sheet	Title	Status
Contents	Table of contents	*for information*
Intro	Introduction and methodology	*for information*
Description & Definitions	Description of tables and Definitions	*for information*
Table_A	**Domestic Extraction**	***to fill in***
Table_B	**Imports of Materials**	***to fill in***
Table_C	**Exports of Materials**	***to fill in***
Table_D	**Material Outflows**	***to fill in***
Table_E	**Balancing Items**	***to fill in***
Table_F	**Headline Indicators**	***to be filled in automatically***
Corresp SDMX Codes	Correspondence EW-MFA Codes to SDMX Product Codes	*can be used for estimation of selected items*
Corresp FAO Crop Codes_DE	Correspondence FAO Crop Codes to EW-MFA Codes_Domestic Extraction	*can be used for estimation of selected items*
Crop Residues Tool_DE	Calculated totals for Crop Residues - Domestic Extraction	*can be used for estimation of selected items*
Grazed Biomass Tool_DE	Calculated totals for Grazed Biomass - Domestic Extraction	*can be used for estimation of selected items*
ConvFact Wood_DE	Conversion Factors Wood - Domestic Extraction	*can be used for estimation of selected items*
Metal Ores Tool 1_DE	Calculated totals for Metal Ores - Mined Ores	*can be used for estimation of selected items*
Metal Ores Tool 2_DE	Calculated totals for Metal Ores - Processed/Shipped Ores	*can be used for estimation of selected items*
Metal Ores Tool 3_DE	Calculated totals for Metal Ores - SMS Back Calculation	*can be used for estimation of selected items*
ConvFact Non-Met Minerals	Conversion Factors Non-Metallic Minerals	*can be used for estimation of selected items*
Chalk, Dol and Limest Tool_DE	Calculated totals for Chalk, Dolomite and Limestone_Domestic Extraction	*can be used for estimation of selected items*
ConvFact Clays_DE	Conversion Factors Clays - Domestic Extraction	*can be used for estimation of selected items*
Sand and Gravel Tool_DE	Calculated totals for Sand and Gravel for Construction_Domestic Extraction	*can be used for estimation of selected items*
Fossil Fuels Tool_DE	Calculated totals for Fossil Fuels - Domestic Extraction	*can be used for estimation of selected items*
Fossil Fuels Tool_Imp	Calculated totals for Fossil Fuels - Imports	*can be used for estimation of selected items*
Fossil Fuels Tool_Exp	Calculated totals for Fossil Fuels - Exports	*can be used for estimation of selected items*
ConvFact Peat	Conversion Factor Peat	*can be used for estimation of selected items*
ConvFact Crude Oil and NGL	Conversion Factors Crude Oil and Natural Gas Liquids_Domestic Extraction	*can be used for estimation of selected items*
ConvFact Natural Gas	Conversion Factors Natural Gas	*can be used for estimation of selected items*
Corresp HS2017_Trade	Correspondence Table HS 2017 Codes to EW-MFA Codes	*can be used for estimation of selected items*
Corresp SITC Rev.4_Trade	Correspondence Table SITC Rev. 4 Codes to EW-MFA Codes	*can be used for estimation of selected items*

Contents | Intro | Description & Definitions | Table_A | Table_B | Table_D | Table_C | Table_E | Table_F | Corresp SDMX Codes | Corresp FAO Crop Codes_DE | Crop

Country support tool

- Provides the basic structure required for these accounts, as well as several simple tools for calculating some categories of materials
- Aligned with the EW-MFA global manual
- Published here
- Translated into Arabic, French, Russian, Spanish is coming

E-learning course on EW-MFA



- Developed in collaboration with CSIRO
- Published on the UNEP e-learning platform

Capacity building activities in 2023-2025

on EW-MFA

At the national level

- In 2023: Jordan, Senegal, Ghana, Uganda and Kazakhstan
- In 2024: Namibia, Ecuador, Belarus (UNDP Belarus)
- In 2025: Benin, Kenya, Thailand, Nepal, Colombia, Jamaica

At the regional and global level

- In 2023, two Global Webinars on Geospatial and Other Data Sources for Environment Statistics: Assessing the Impact of the Economy on the Environment
  - 21-23 March for countries in Africa, Latin America and the Caribbean
  - 18-20 April for Asian, Europe and North Africa

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Thank you

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